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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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FRIENDS OF HAMILTON GRANGE and
DR. JOHN CARDWELL,

Plaintiffs,

v.

08 Civ 5220 (DLC)

DIRK KEMPTHORNE, Secretary of the Interior;
U.S. DEPARTMENT OF THE INTERIOR;
MARY A. BOMAR, Director of the National
Park Service; NATIONAL PARK SERVICE; and
MARIA BURKS, Commissioner of National Parks
of New York Harbor and Superintendent of
Manhattan Sites,

Defendants.
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DECLARATION OF DAVID A. AITKEN

David A. Aitken, pursuant to the provisions of 28 U.S.C. § 1746, declares as follows:

1. I am the Division Chief of Design and Construction for the Eastern Team of the National Park Service ("NPS"), Denver Service Center. I have held this position for three and a half years. I have over nineteen years of experience as an employee of the National Park Service Denver Service Center. I am a Registered Professional Engineer and certified Project Management Professional through the Project Management Institute. I have over thirty-two years

of design and construction experience. As Division Chief, I am responsible, along with Maria Burks, the Park Superintendent, for the successful completion of the Hamilton Grange restoration for the Northeast Region and the NPS.

2. Beginning in approximately 1999 as a project manager, subsequently as a Branch Chief for Project Managers, and currently as Division Chief, I have been involved in the project to renovate and relocate the Grange. In my position as a project manager and supervisor of project managers, I coordinated certain early planning aspects of the Grange project including budget formulation, preliminary designs, and reviewed reports on the project. As Division Chief, I provided technical expertise on the project to the project team and consulted with architectural and engineering firms that provided planning and design on the project pursuant to contracts with the NPS.

3. I have observed the Grange personally on several occasions, including before it was removed from its former location on Convent Avenue, and again while it was located in Convent Avenue before it was moved to St. Nicholas Park.

4. It is critical that the Grange be secured on a properly engineered permanent foundation in a timely manner to minimize damage to the Grange. The Grange is currently on a temporary foundation in St. Nicholas Park. The NPS is prepared to place the Grange on the permanent foundation as early as June 19th and plans to secure the Grange to the permanent foundation in the following weeks.

5. Structural damage to the Grange has already been documented during this relocation process. I observed several cracks which had formed as a result of the move when I personally observed the house on June 6th.

6. If the Grange remains on its temporary foundation for longer than anticipated, structural damage to the building, which has already been observed and photo documented during the building's relocation to the St. Nicholas Park, will continue to occur. These risks to the Grange are caused by the lack of continuous foundation support provided by the temporary foundation (described in ¶¶ 7-10 below), the temporary earth mound on which the foundation is currently resting (described in ¶¶ 11-14 below), and the risk of exposure to weather while on the temporary foundation (described in ¶¶ 15-17 below). Moreover, the Grange cannot simply be re-oriented from a northeast orientation to a southwest orientation in light of the substantial work that has already been completed on a foundation that anticipated a northeast orientation (described in ¶¶ 18-19 below).

**I. DANGER TO THE GRANGE POSED BY THE
TEMPORARY POINT LOADED FOUNDATION**

7. Unlike a permanent foundation, which provides continuous, uniform support to the walls that support the building's weight (known as "load bearing" walls), the Grange's temporary foundation provides only point loaded support, or support from wood cribbing and steel beams at intermittent locations. This point load bearing foundation poses risks to the Grange the longer it remains on the temporary structure. These risks include the building settling unevenly on the temporary foundation (known as "settlement"), twisting of the building (known as "wracking"), and the bending of the wooden structure of the building between the point load supports (known as "deflection").

8. The longer the Grange, a building that weighs approximately 300 tons, remains on a temporary point loaded support, the greater the likelihood that the building will continue to

settle unevenly on the temporary foundation because of the lack of uniform, continuous support for its weight. This differential or uneven settlement poses a danger to the structure of the Grange because the shifting of the building caused by settlement causes cracking in the plaster, wood trim, and potentially windows and the wooden structural components of the building itself.

9. The longer the Grange remains on its temporary foundation, the greater the possible damage to the Grange that will be caused by wracking. The temporary wooden support (known as "cribbing") that comprise the point load supports for the building are not connected to one another, and therefore, each support behaves differently and independently, potentially settling in different degrees, different rates, and in different locations. This creates uneven support for the building's weight, causing the building to twist. Like settling, wracking causes damage to the building including cracking of the plaster and wood trim. If bad enough, wracking could break windows in the building and cause structural damage. The best means to prevent wracking is to move the Grange to its permanent foundation on which it will be uniformly supported.

10. The longer the Grange remains on a temporary point loaded foundation, the greater the possible damage to the Grange that will be caused by deflection. Specifically, the approximately 300-ton weight of the house is resting on a non-continuous support system, and the wooden beams that comprise the structure of the Grange can bend in between the point load supports. Deflection poses a danger to the Grange because the wooden beams can bend and even break, damaging floors, walls, and windows supported by those beams. The only way to eliminate the risk of deflection is by securing the Grange to its permanent foundation on which it will be uniformly supported.

II. DANGER TO THE GRANGE POSED BY THE TEMPORARY EARTHEN FILL BELOW THE FOUNDATION

11. The longer the Grange is kept on a temporary foundation, the greater the additional risk to the Grange from settlement and wracking because of the temporary earthen fill upon which it is currently resting. The temporary foundation of the Grange is located on a flat mound of compacted earthen fill built to support the Grange for a short time. While construction teams have worked hard to compact the earthen fill to create an even and stable support for the Grange, there is risk that the ground will settle unevenly, or differentially, under the weight of the Grange with the passage of time.

12. Differential settlement of the ground below the temporary foundation could occur for a number of reasons, including water saturation of parts of the ground. Water that drains through the fill may soften and weaken the temporary earthen support and create settlement beneath the wood cribbing. In contrast, when the permanent foundation is completed, drainage features will control and remove water from the site and protect the permanent Grange foundation. While the Grange remains on the temporary foundation, permanent drainage features cannot be completed and water could saturate the earthen fill below the temporary foundation, creating differential settlement and wracking of the building.

13. Differential settlement of the ground could also occur if some areas of the earthen fill are not as well compacted as others. As the ground settles unevenly, the temporary foundation above it becomes uneven, putting stress on the building and exposing the Grange to dangers of additional settlement and wracking as described above.

14. If the Grange remains on the temporary foundation, there are risks to the area around the foundation site in St. Nicholas Park. Because of construction, vegetation has been removed from the area (known as "denuding"). After the Grange is placed on the permanent foundation, this area will be re-vegetated and landscaped. Without vegetation, there is a risk of erosion of the soil, including the temporary fill upon which the Grange is currently resting.

III. DANGER TO THE GRANGE POSED BY EXPOSURE TO WEATHER

15. The Park Service has done its best to protect the Grange from the elements but the Grange is currently not "weather tight," meaning water could get into the interior of the house. Water poses a danger to the Grange because it can damage wood, plaster, and other original, historical material put into the house by Alexander Hamilton during the building's construction (known as the "historic fabric"). Additionally, if the structure is wet and not dried out sufficiently and quickly, there is risk that mold and mold spores, a potentially hazardous material, will develop and spread throughout the house.

16. For example, the front door of the Grange was removed for restoration and the wall temporary enclosed with plastic as part of the move to St. Nicholas Park. This creates a possible entry point for water while the Grange remains on a temporary foundation. The front door cannot be replaced until the Grange is placed on its permanent foundation. Additionally, the porches on either side of the house have been removed, leaving exposed to the elements over a quarter of the building's windows, which are usually protected by the porch roofs. The porch roofs cannot be restored and replaced until the Grange is placed on its permanent foundation. The longer the period of time before the Grange can be affixed to the foundation, the greater the risk that water can enter the house and cause mold and structural damage.

17. In addition, while the Grange remains on the temporary foundation, the wooden beams that form the platform of the house are exposed to the elements. This wooden underlayment is already damaged in places from rot and decay. The longer the wood remains exposed to the weather, the greater the risk that the damage will increase, weakening the structure of the building. Once placed on the permanent foundation, the wood will no longer be exposed to the weather, reducing the risk of additional loss of historic fabric and preserving the structural integrity of the building.

IV. RE-ORIENTING THE GRANGE ON THE NEARLY COMPLETED FOUNDATION IS NOT POSSIBLE

18. The NPS began construction in January 2008 on the permanent foundation for the Grange. The permanent foundation under construction in St. Nicholas Park is now approximately 70% complete. Re-orientation of the Grange in St. Nicholas Park would require at least major portions of that foundation completed to date to be demolished and rebuilt. The building cannot be simply placed on the currently constructed foundation in a different orientation. The placement of the historic stairs, sub-basement, and basement require the foundation designed and built for the northeast orientation. Additionally, access for utility systems such as water and electric power would have to be redesigned to supply the reoriented building.

19. A new orientation for the Grange would require that a new construction access route be cut into the St. Nicholas Park area directly adjacent to the CCNY Engineering Building. The foundation system of the CCNY building is not known and additional engineering and geo-technical services would be required to ensure its stability. It is possible new construction would

require excavation into the embankment supporting the CCNY building and it would be necessary to provide retaining walls or some permanent support to that building if the hill beside it is excavated.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: Oceanside, CA
June __, 2008


DAVID A. AITKEN